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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/426,654	10/25/1999	KENJI NEMOTO	FUJR-16.535	2188

7590 01/26/2005

Katten Muchin Zavis Rosenman
575 Madison Avenue
New York, NY 10022

EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/426,654

Applicant(s)

Nemoto

Examiner

Rafael Perez-Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 24, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on August 24, 2004. **Claims 1, 3, and 5-7** are now pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. **Claims 1 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida et al. (U.S. Patent # 6,233,257 B1)** in view of well known prior art (MPEP 2144.03), and further in view of **Scott (U.S. Patent # 5,745,484)**.

Consider **claim 1**, Yoshida et al. clearly show and disclose a wireless local loop (WLL)

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system 50 (radio communication system) (figure 1A) for performing radio communication control having frames 200, 202 with a plurality of transmit and receive time slots (T1-T4 and R1-R4) (figures 2A and 2B) and guard spaces (intervals) 306, 308, 320, 322 between said receive time slots (figures 3A and 3B), comprising:

a propagation information calculation device (not shown but inherent) arranged in radio base station 100 (figure 1A) and including continuous receive time slot allocating means (not shown but inherent) for allocating to a WLL personal station 102 (terminal unit) (figure 1A) more than one receive time slot R1-R4 in a frame 200, 202 (figures 2A-3B) to generate a continuous receive time slot (i.e., time slot 212 with guard time 320) (figure 3B) for the WLL personal station 102 (terminal unit) (figure 1A) (column 4 lines 12-16, column 4 line 54 - column 5 line 29, and column 6 lines 38-48) and propagation information calculating means (not shown but inherent) for communicating with the WLL personal station 102 (terminal unit) (figure 1A) during a period of the continuous time slot to calculate propagation information about radio wave propagation between radio base station 100 and the WLL personal station 102 (terminal unit) (figure 1A) (abstract, figure 4A steps 412-416 414, figure 4B steps 432-436, figure 4C steps 412, 414, 454, and 456, column 2 lines 11-34, column 6 lines 19-37, column 8 line 48 - column 9 line 8, column 9 lines 30-52, and column 10 lines 3-14); and

a transmission timing calculation device (not shown but inherent) arranged in the WLL personal station 102 (terminal unit) (figure 1A) and including a transmission timing calculating means (not shown but inherent) for calculating, during the period of the continuous time slot and based on the propagation information, transmission timing for a signal to be transmitted from the

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WLL personal station 102 (terminal unit) to the radio base station 100 (figure 1A) (abstract, figure 4B steps 436 and 438, figure 4C steps 454-458, column 4 lines 23-28, column 9 lines 43-52, and column 10 lines 3-23) and signal transmitting means (not shown but inherent) for transmitting the signal in accordance with the transmission timing (abstract, step 418 in figures 4A and 4B, figure 4C step 460, column 3 lines 54-57, column 9 lines 53-58, and column 10 lines 23-28),

wherein to calculate the propagation information, the propagation information calculating device (not shown but inherent) measures a time from transmission of control data (test data) to the WLL personal station 102 (terminal unit) (figure 1A) to reception of the control data (test data) returned from the WLL personal station 102 (terminal unit) (figure 1A) and calculates a radio wave propagation time or distance between the radio base station and the WLL personal station 102 (terminal unit) (abstract, figures 1A and 4A-4C, and column 6 lines 19-37).

However, Yoshida et al. do not specifically disclose that the continuous time slot allocating means (not shown but inherent) cancels allocation of the continuous time slot after the transmission timing is calculated.

Nonetheless, the Examiner takes Official Notice of the fact that it is notoriously well known in the art to cancel allocation of a continuous time slot after the transmission timing is calculated for the purpose of reusing resources and increasing the capacity of the system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to cancel, in the system of Yoshida et al., the allocation of the continuous time slot after the transmission timing is calculated in order to reuse resources to

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increase the capacity of the system as known in the art.

However, Yoshida et al., as modified by well known teachings in the art, do not specifically disclose from the more than one receive time slot, a continuous receive time slot includes a continuous receive portion and a continuous guard bit portion.

In the same field on endeavor, Scott clearly shows and discloses a radio communication system in which a base station allocates more than one receive time slot comprising a continuous receive portion and a continuous guard time portion to a user station for the purpose of calculating accurate propagation information (abstract, figures 5A-5C and 7, column 4 lines 43-53, column 10 lines 52-67, column 11 line 48 - column 12 line 4, column 12 lines 45-55, column 13 lines 10-33, and column 14 lines 10-22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made allocate a continuous receive portion and a continuous guard time portion to the user station, as taught by Scott, in the system of Yoshida et al., as modified by well known prior art, for the purpose of calculating accurate propagation information.

Consider **claim 3**, Yoshida et al., as modified by well known prior art, and as further modified by Scott, clearly show and disclose the claimed invention **as applied to claim 1 above**, and, in addition, Yoshida et al. also disclose that the transmission timing calculating device (not shown) stores, in some kind of memory device, information on the calculated transmission timing (abstract and column 2 lines 33-35).

However, Yoshida et al. do not specifically disclose that the information is stored in a nonvolatile memory.

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Nonetheless, the Examiner takes Official Notice that it is notoriously well known in the art to use a nonvolatile memory to permanently store information that is used frequently.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to specifically use a nonvolatile memory in the system of Yoshida et al. to store the information on the calculated transmission timing in order to permanently store such information and reduce the system's processing time.

4. **Claims 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida et al. (U.S. Patent # 6,233,257 B1)** in view of **Scott (U.S. Patent # 5,745,484)**.

Consider **claims 5-7**, Yoshida et al. clearly show and disclose a wireless local loop (WLL) system 50 (radio communication system) (figure 1A) and method for performing radio communication control having frames 200, 202 with a plurality of transmit and receive time slots (T1-T4 and R1-R4) (figures 2A and 2B) and guard spaces (intervals) 306, 308, 320, 322 between said receive time slots (figures 3A and 3B), comprising:

a propagation information calculation device (not shown but inherent) arranged in radio base station 100 (figure 1A) and including continuous receive time slot allocating means (not shown but inherent) for allocating to a WLL personal station 102 (terminal unit) (figure 1A) more than one receive time slot R1-R4 in a frame 200, 202 (figures 2A-3B) to generate a continuous receive time slot (i.e., time slot 212 with guard time 320) (figure 3B) for the WLL personal station 102 (terminal unit) (figure 1A) (column 4 lines 12-16, column 4 line 54 - column 5 line 29, and column 6 lines 38-48) and propagation information calculating means (not

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shown but inherent) for communicating with the WLL personal station 102 (terminal unit) (figure 1A) during a period of the continuous time slot to calculate propagation information about radio wave propagation between radio base station 100 and the WLL personal station 102 (terminal unit) (figure 1A) (abstract, figure 4A steps 412-416 414, figure 4B steps 432-436, figure 4C steps 412, 414, 454, and 456, column 2 lines 11-34, column 6 lines 19-37, column 8 line 48 - column 9 line 8, column 9 lines 30-52, and column 10 lines 3-14); and

a transmission timing calculation device (not shown but inherent) arranged in the WLL personal station 102 (terminal unit) (figure 1A) and including a transmission timing calculating means (not shown but inherent) for calculating, during the period of the continuous time slot and based on the propagation information, transmission timing for a signal to be transmitted from the WLL personal station 102 (terminal unit) to the radio base station 100 (figure 1A) (abstract, figure 4B steps 436 and 438, figure 4C steps 454-458, column 4 lines 23-28, column 9 lines 43-52, and column 10 lines 3-23) and signal transmitting means (not shown but inherent) for transmitting the signal in accordance with the transmission timing (abstract, step 418 in figures 4A and 4B, figure 4C step 460, column 3 lines 54-57, column 9 lines 53-58, and column 10 lines 23-28) ,

wherein to calculate the propagation information, the propagation information calculating device (not shown but inherent) measures a time from transmission of control data (test data) to the WLL personal station 102 (terminal unit) (figure 1A) to reception of the control data (test data) returned from the WLL personal station 102 (terminal unit) (figure 1A) and calculates a radio wave propagation time or distance between the radio base station and the WLL personal

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station 102 (terminal unit) (abstract, figures 1A and 4A-4C, and column 6 lines 19-37).

However, Yoshida et al. do not specifically disclose that from the more than one receive time slot, a continuous receive time slot includes a continuous receive portion and a continuous guard bit portion.

In the same field on endeavor, Scott clearly shows and discloses a radio communication system in which a base station allocates more than one receive time slot comprising a continuous receive portion and a continuous guard time portion to a user station for the purpose of calculating accurate propagation information (abstract, figures 5A-5C and 7, column 4 lines 43-53, column 10 lines 52-67, column 11 line 48 - column 12 line 4, column 12 lines 45-55, column 13 lines 10-33, and column 14 lines 10-22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made allocate a continuous receive portion and a continuous guard time portion to the user station, as taught by Scott, in the device and method of Yoshida et al. for the purpose of calculating accurate propagation information.

Response to Arguments

5. Applicant's arguments with respect to **claims 1 and 5-7** have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's failure to adequately traverse (i.e., no argument/reply in accordance with 37

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CFR 1.111(b)) the Examiner's taking of Official Notice in the Office Action mailed on July 30, 2003 is taken as an admission of the facts noticed.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Hand-delivered responses should be brought to

220 S. 20th St.
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.


Rafael Perez-Gutierrez

R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**
PATENT EXAMINER

January 24, 2005